Degree apprenticeships: a new educational model for radiography in the United Kingdom

NIGHTINGALE, Julie and SEVENS, Trudy

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Authors:	J. M. Nightingale, T. Sevens; Sheffield/UK
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Aims and objectives

Launched in September 2015 in England, degree apprenticeships are an opportunity to develop employer-focused higher education that can play a role in meeting employers' skills needs, boosting local graduate retention and local growth, and increasing social mobility [1]. Apprentices should earn a wage and graduate without student debt (unlike traditional students who accrue a student loan); these financial advantages may attract both mature students and those from lower income households, thus contributing to widening participation outcomes.

Degree Apprenticeships potentially offer an alternative path to the healthcare professions, including radiography. However other employment sectors who have introduced degree apprenticeships (including management, digital, and engineering), have experienced significant challenges, as apprenticeships place a far greater expectation upon the employers. Employer engagement with apprenticeships is therefore often intermittent, compounded by concerns about commitment and costs. Not surprisingly, there are also risks for education providers in adopting employer-led curricula and negotiating individual employer training contracts [2].

Following changes to the funding and taxation of hospitals in England (the introduction of the Apprenticeship Levy in April 2017), hospitals have been financially incentivised to engage in apprenticeship training. There has been a large increase in employer interest in, and demand for, degree apprenticeships [1]. In response the university sector is developing degree apprenticeships across the breadth of healthcare, dentistry and social work [1].

Three degree apprenticeships related to radiography (diagnostic radiography, therapeutic radiography and sonography) herald a new approach to collaborative curriculum design between key stakeholders. The development phase of these apprenticeships includes the creation of a wide national stakeholder group known as a Trailblazer, including representatives of employers, universities, professional bodies and governmental organisations. The Trailblazer is responsible for the creation of an occupational standard which will provide a model for the paid 'on the job' degree apprenticeship training.

Few studies provide an insight into the challenges of the Trailblazer phase. Engaging employers in programme design is difficult, with many employers feeling uncomfortable in being the 'lead' in curriculum design when they are working with individuals they class as experienced academics [3]. Some stakeholders perceive the vocational nature of apprenticeships as less rigorous than traditional academic study [4], and the trainee

identity changing from student to employee also creates a major shift in stakeholder perceptions [5]. With a primary focus on employment outcomes, there is also a danger that the important experiences of being a learner or student are dampened down in favour of the requirement to be an employee [6].

The success of degree apprenticeships in radiography-related disciplines therefore depends upon managing stakeholder expectations effectively to ensure equity with traditional university-based radiography education. This research begins this process by exploring the expectations, motivations and perceptions of those most closely engaged with the radiography apprenticeship developments, that is, the trailblazer membership of the three national Trailblazer groups (diagnostic radiography, therapeutic radiography and sonography). We aimed to identify any issues prior to the next phase of apprenticeship development and implementation.

Methods and materials

As degree apprenticeships are still in their infancy, a qualitative research approach is most appropriate to explore this under-researched area and facilitate effective strategic interventions during programme development and delivery.

This study utilises a multiple case study design following the pragmatic constructivist approach first described by Merriam [7]. Cases (e.g. an organisation, department, or individual) are selected to provide a rich description that illuminates our understanding of the phenomena [7], with interviews being the most common form of qualitative data collection in this approach [8].

The three radiography-related Trailblazer groups were each investigated as an individual case study, enabling an in-depth exploration of the patterns and themes emerging within the trailblazer group. Themes were then compared across the three cases (trailblazer groups) to identify if they are replicated elsewhere or are unique to the individual group. Exploring the perceptions of the individual participants within each group will provide an opportunity to gain a rich understanding [9] of how they perceive their role within the Trailblazer group.

Participants

We have undertaken 15 stakeholder interviews (see Figure 1) which could be perceived as relatively small, although is typical of a qualitative study [10, 11] and will provide the depth required within each case. Initial contact with the participants was by email inviting them to participate. They were made fully aware of the study aims and provided with a participant information sheet. This included information on consent, confidentiality, an introduction to the data collection methods, how the information will be used and stored, sponsors and where to gain further information.

Ethical implications

Ethical approval was gained from Sheffield Hallam University [ER7701385], and 'gatekeeper' approval was granted from the trailblazer chair persons to access the participants in each trailblazer group by email.

Data collection

Following 2 pilot interviews, minor changes were made to the interview schedule. Initial semi structured interviews were conducted with the chairs of the trailblazer groups (all employer representatives), followed by interviews with other stakeholders. Both investigators who conducted the interviews were radiography academics with experience in qualitative research, and triangulation, reflexivity and constant comparison methods were utilised to ensure consistency and increase credibility.

Most interviews were conducted face to face which allows the researcher to observe non-verbal signs [12] but some participants preferred a telephone interview. Fifteen interviews were conducted which each lasted approximately 40 minutes and these were transcribed verbatim [9].

Data Analysis

To support the cross-case analysis of different professional roles and perceptions of apprenticeship developments, the researchers coded the data to help identify any recurring themes and patterns. The interview data from each participant was analysed for initial patterns and then the patterns examined carefully to determine if they are replicated in those of other participants from within the same case (trailblazer group), and across the three cases. Thus by cycling through individual transcripts as well as within and across cases, both original and recurring themes are able to emerge. This analysis method has been used successfully in apprenticeship research previously [2] and will facilitate a detailed understanding of the perceptions and challenges across the sample as a whole.

Images for this section:

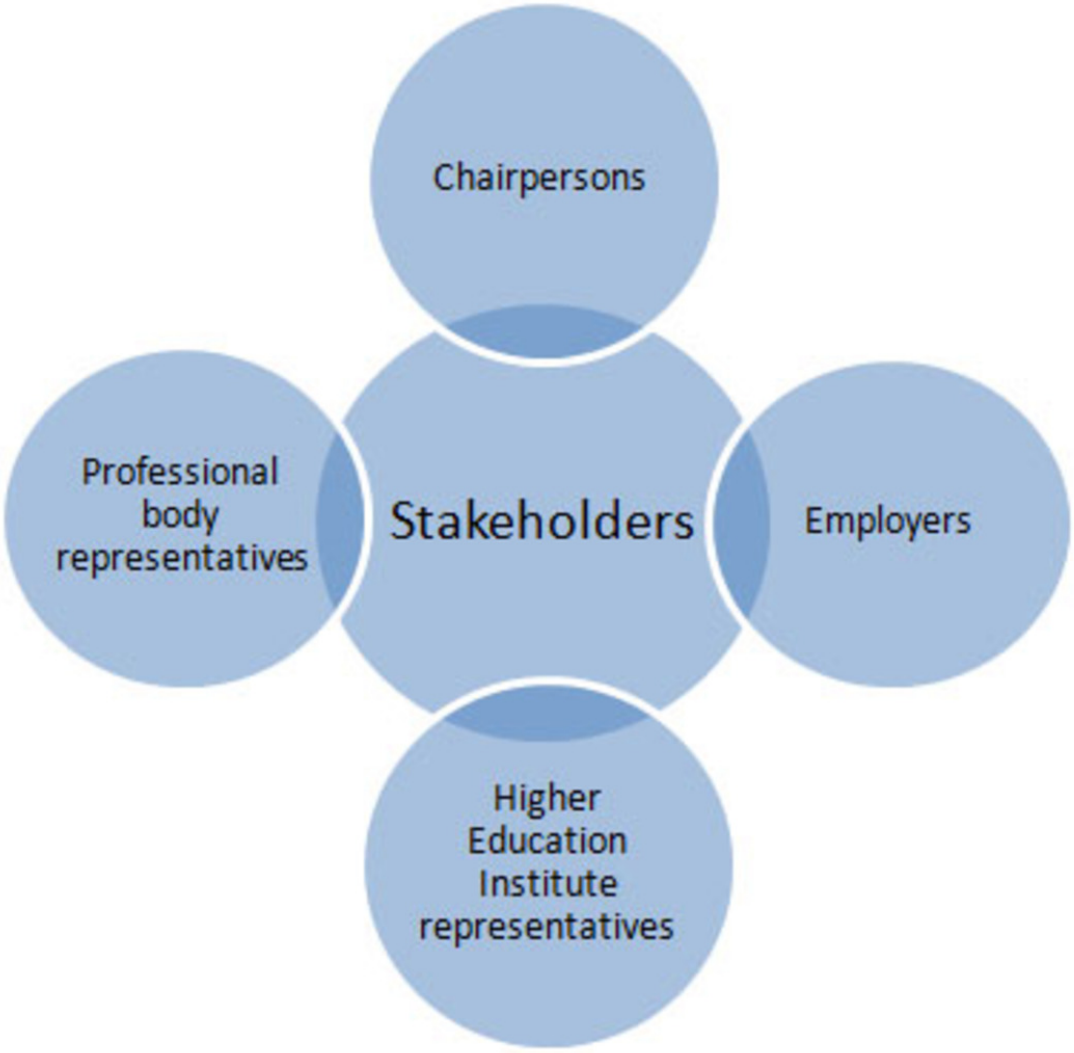

Fig. 1: Participants are drawn from the Trailblazer membership, which includes four stakeholder groups.

Results

The data collection has been completed and the initial analysis has been undertaken which has identified emerging themes. Further analysis is on-going to identify the within-case and the cross-case thematic comparisons.

Four primary themes have emerged within the initial analysis: professional protectionism (figure 2); opportunities (Figure 3); professional recognition (Figure 4) and workforce challenges (Figure 5). Each of these had several sub-themes as shown in these figures.

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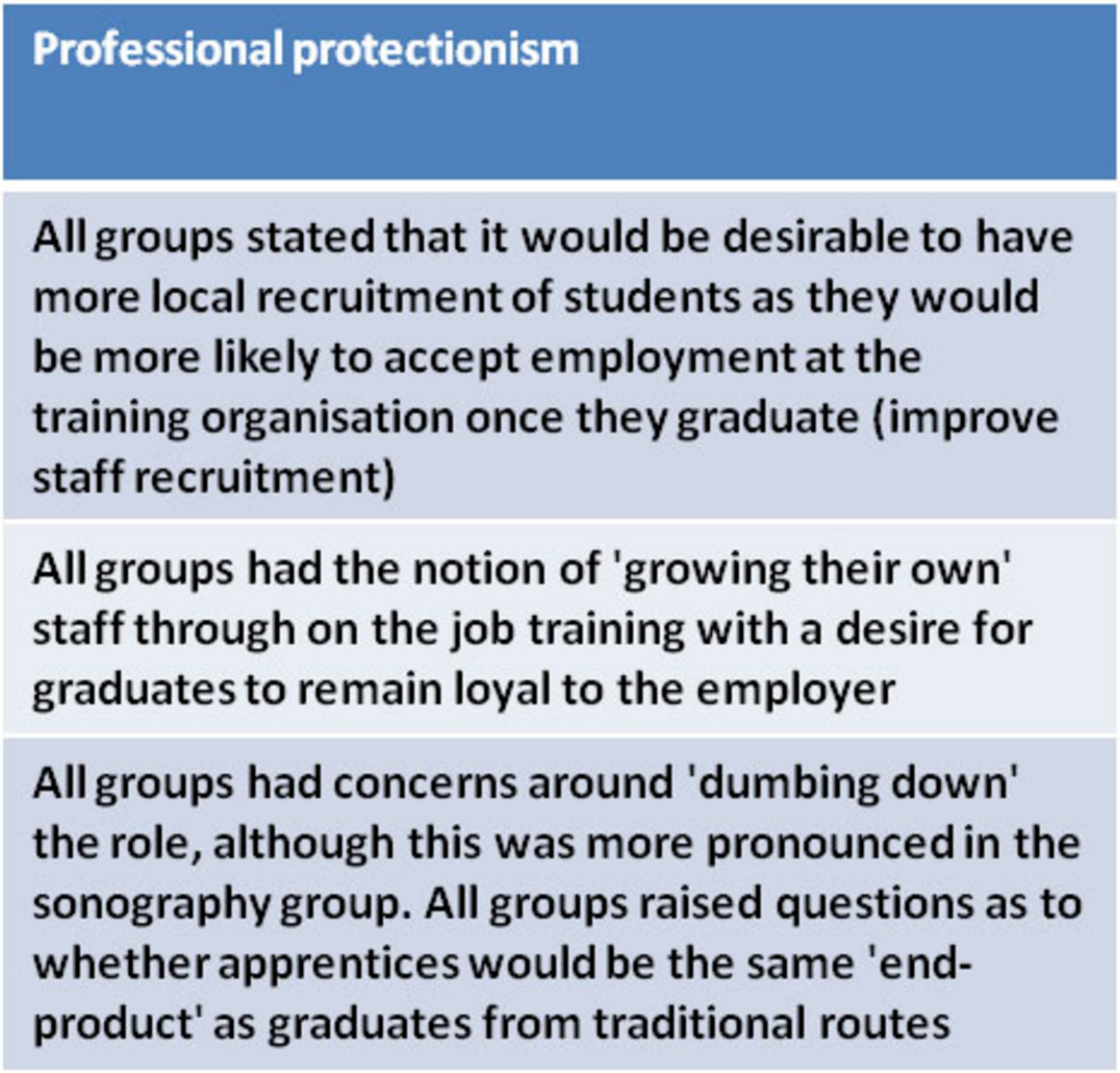

Fig. 2: Emerging Theme 1 - Professional Protectionism

Fig. 3: Emerging Theme 2 - Opportunities of Apprenticeships

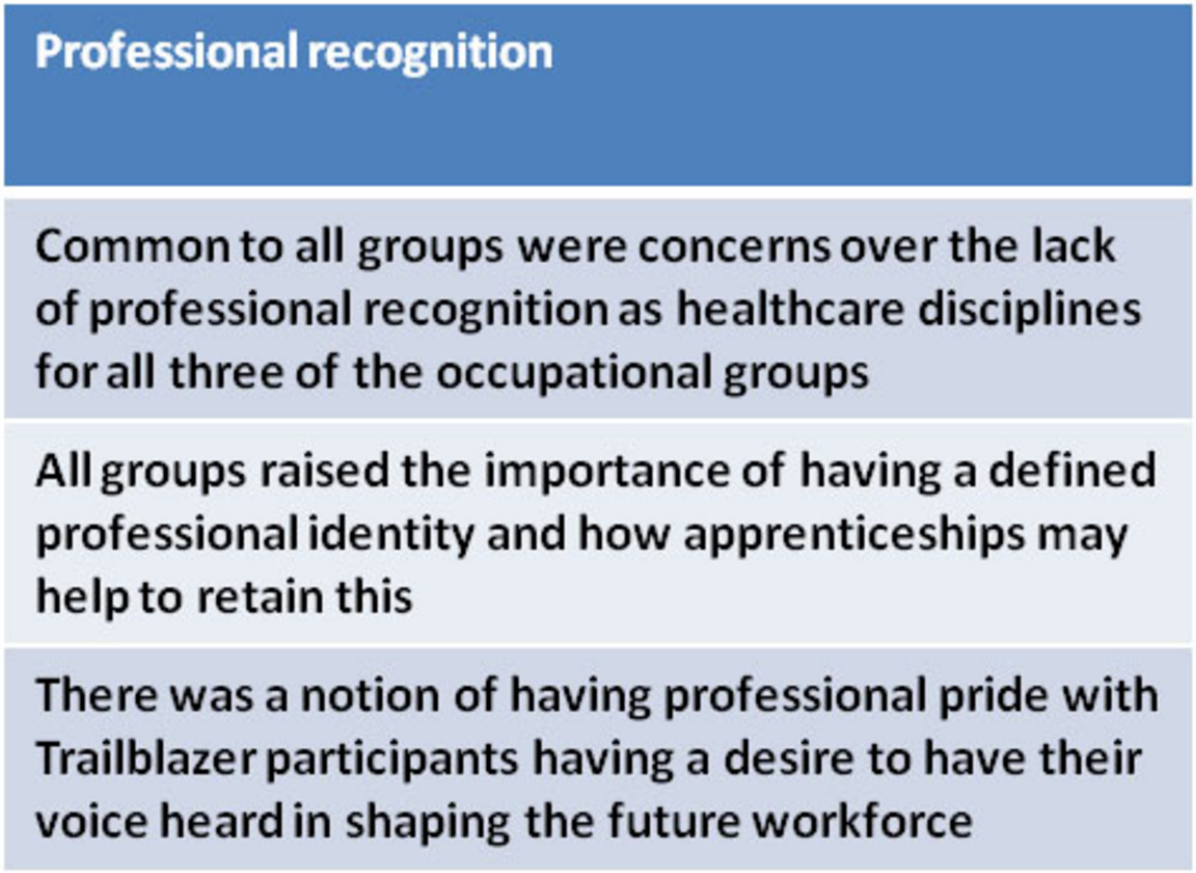

Fig. 4: Emerging Theme 3 - Professional Recognition

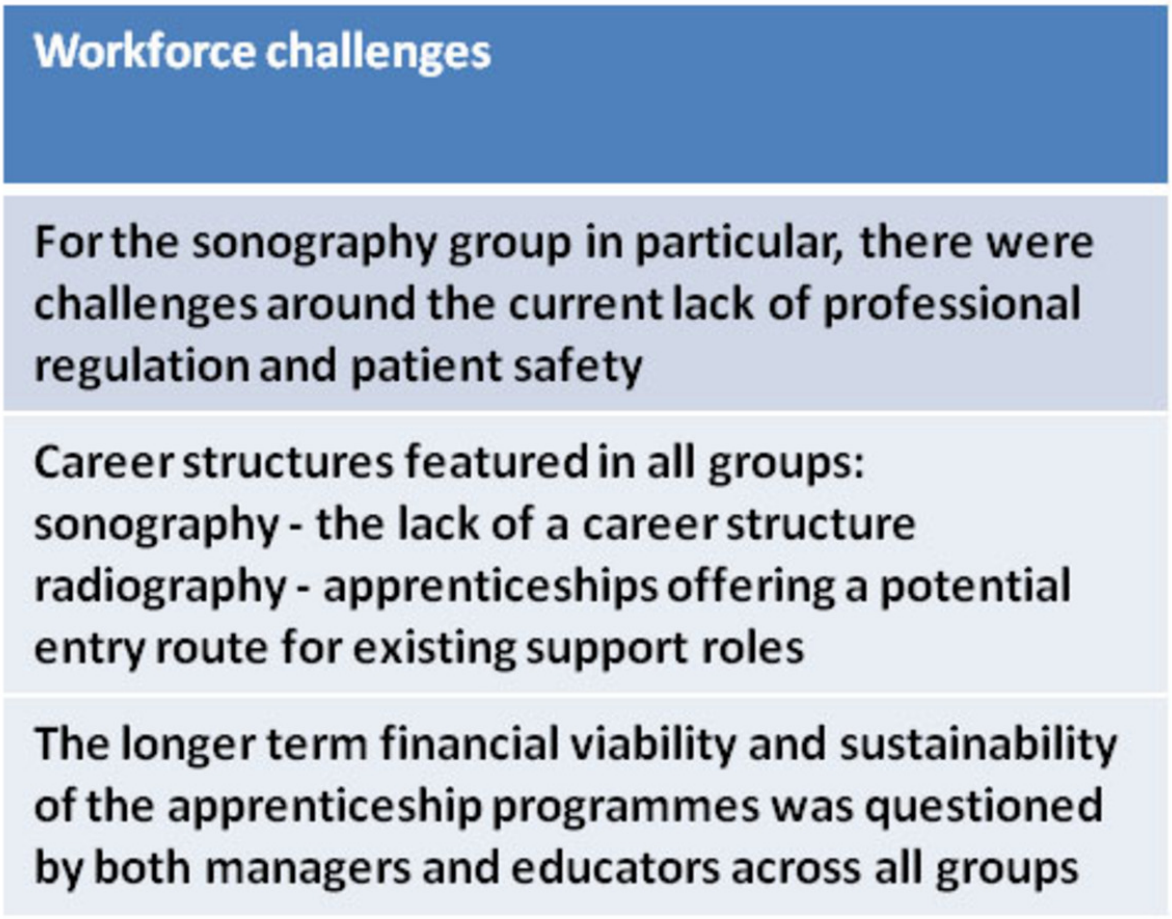

Fig. 5: Emerging Theme 4 - Workforce Challenges

Conclusion

The participants on the whole were positive about their experiences of being part of the trailblazer group and about the proposal for the introduction of the degree apprenticeship routes. However, some participants in the sonography group had a degree of scepticism and particular concerns over 'dumbing down the role' and the current lack of professional regulation for sonographers in the UK. There were also some concerns around the equity of training, pay and opportunities for those studying on an apprenticeship route compared to those on a traditional University based programme.

Degree apprenticeships are a new concept in the UK and the experience of each development stage should be captured, built upon and learnt from. While there is no previous research into radiography-related degree apprenticeships, in other sectors Mulkeen et al [3] identified several challenges for employers which were similar to those identified in this study, including concerns about the potentially hidden financial costs and about the need to upskill staff to become effective mentors. Rowe et al [2] also identified the vital role for mentors, and the critical support required by managers to facilitate the upskilling of their workforce. All stakeholder groups in Mulkeen's study, as in this study, expressed concerns over parity of esteem between traditional degree students and degree apprentices, both during the training period and post graduation [3]. However while in previous research the concern is that apprentices may be disadvantaged, this was not found to be the main perspective in this study, with radiography managers recognising that the 'home grown' apprentice may be favoured in many situations over traditional students. This suggests that Higher Education Institutions will need to work closely with employers and be vigilant to ensure that all students, no matter what the educational route to practice, are given the requisite opportunities to succeed in their chosen career.

With further work on-going to compare and contrast the themes across trailblazer groups, it is hoped this study will be able to make recommendations to support radiography evidence-based apprenticeship curriculum developments and will facilitate a seamless integration of apprentices into the existing radiography workforce.

Personal information

Prof Julie M Nightingale (presenting author)

Professor of Diagnostic Imaging Education

Sheffield Hallam University, U.K.

Email: J.Nightingale@shu.ac.uk

Dr Trudy Sevens (co-author)

Professional Lead (Diagnostic Imaging) and Department Lead for Degree Apprenticeships

Sheffield Hallam University, U.K.

Email: T.J.Sevens@shu.ac.uk

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